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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,350	07/11/2003	John K. Cini	MXI-285	6687

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EXAMINER
LI, RUIXIANG

ART UNIT	PAPER NUMBER
1646	

DATE MAILED: 04/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/618,350	CINI ET AL.	
	Examiner	Art Unit	
	Ruixiang Li	1646	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.

4a) Of the above claim(s) *2, 5, 7, 8, 22, 24, 27, 41, and 42* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3, 4, 6, 9-21, 23, 25, 26, and 28-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *08/02/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of the species of mannitol in the reply filed on 03/16/2006 is acknowledged. Applicant's election of the species of mannitol in the reply filed on03/16/2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. Claims 1-42 are pending. Claims 1, 3, 4, 6, 9-21, 23, 25, 26, and 28-40 are under consideration. All other claims are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species.

Information Disclosure Statement

3. The Information Disclosure Statement submitted on 10/13/2004 has been received by the Office and the listed references have been considered by the Examiner.

Claim Rejections—35 USC § 102(b)

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 4, 9, 10, 12, 13, 15, 20, 21, 23, 26, 29-31, 33, and 38-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Foster et al. (US 5,217,954 A, 8 June 1993).

Foster et al. teach preparation of a pharmaceutical formulation comprising a protein, bFGF, a stabilizing chelator, such as DTPA or EGTA. The formulation comprises optionally an agent for tonicity, a preservative or other auxiliaries, such as mannitol, glycerol, sodium chloride (see, e.g., columns 3-6) or Tris (Example 1). The concentration of chelating agent is present in amounts of from about 0.001% to about 2.0% percent (weight/weight) of the overall formulation (the 4th paragraph of column 4), which is within the recited concentration of DTPA, about 1 μM to about 10 mM in claim 4. Foster et al. teach that the stabilizer can be used in combination with other stabilizers, such as citrate (the 2nd paragraph of column 5) and that the formulation can be prepared in a buffer system, such as sodium citrate (the 4th paragraph of column 5), with the pH of the formulation being from about 2 to about 8 (the 6th paragraph of column 5). Foster et al. teach continuous release formulations, including microcapsules that are essentially small particles of active compounds embedded in a suitable polymer (the 4th paragraph of column 5). Foster et al. further teach that the formulation comprises 0.01%-10% FGF in solution (lines 48-49 of column 6, and in Example 4, the concentration of FGF is 100 ug/ml).

Accordingly, the reference of Foster et al. meets the limitations of claims 1, 4, 9, 10, 12, 13, 15, 20, 21, 23, 26, 29-31, 33, and 38-40.

6. Claims 1, 3, 4, 6, 9-13, 15, 21, 23, 25, 26, 28-31, 33, 39, and 40 are rejected under

35 U.S.C. 102(b) as being anticipated by Kerwin et al. (US Patent No. 5,929,031, 27 July 1999).

Kerwin et al. teach preparation of a pharmaceutical composition (column 8), which comprises a protein, hemoglobin at a concentration of 0.001% to 90% (w/v) (4 mg/ml and 100 mg/ml were used in Example 1 and 2), a reducing agent, such as sodium ascorbate or 0.03% (w/v) polysorbate 80 (lines 24-25 of column 13), chelators, such as 0-200 μM of DTPA and/ or EGTA (lines 45-51 of column 8), 0-2 M of mannitol (lines 39-42 of column 8), which is within the range recited in claim 6. The formulation may also comprise one or more buffers, such as citrate or Tris (line 65 of column 12), and salts, such as sodium chloride (lines 32-35). The pH of the composition can be at about 6.5-9.5 (line 52 of column 8).

Accordingly, the reference of Kerwin et al. meets the limitations of claims 1, 3, 4, 6, 9-13, 15, 21, 23, 25, 26, 28-31, 33, 39, and 40.

Claim Rejections—35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 16-19 and 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foster et al. (US 5,217,954 A, 8 June 1993), as applied to claims 1, 4, 9, 10, 12, 13, 15, 20, 21, 23, 26, 29-31, 33, and 38-40 above, and further in view of Hagiwara et

al. (U.S. Patent No. 6,165,467, December 26, 2000).

Foster et al. teach preparing a stabled formulation comprising FGF as applied to claims 1, 4, 9, 10, 12, 13, 15, 20, 21, 23, 26, 29-31, 33, and 38-40 above.

Foster et al. do not teach preparing a formulation comprising an antibody, a monoclonal antibody or a human antibody.

Hagiwara et al. teach preparing a stable human monoclonal antibody preparation (see, e.g., Abstract). Hagiwara et al. also teach human monoclonal antibodies have an undesirable property that they easily aggregate and precipitate in a solution state (the 4th paragraph of column 1).

Therefore, it would have been obvious to one of skilled in the art to prepare a pharmaceutical composition comprising a human monoclonal antibody instead of FGF according to the methods taught by Foster et al. with a reasonable expectation of success. One would have been motivated to do so because a human monoclonal antibody and a protein have the basic components—amino acids and a human monoclonal antibody possesses characteristics that tend to form aggregates as taught by Hagiwara et al. (the 4th paragraph of column 1), and thus the formulation taught by Foster et al. would stabilize a human monoclonal antibody

9. Claims 14 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kerwin et al. (US Patent No. 5,929,031, 27 July 1999), as applied to claims 1, 3, 4, 6, 9-13, 15, 21, 23, 25, 26, 28-31, 33, 39, and 40 above, and further in view of Hagiwara et al. (U.S. Patent No. 6,165,467, December 26, 2000).

Kerwin et al. teach preparing a stabled formulation comprising hemoglobin

applied to claims 1, 3, 4, 6, 9-13, 15, 21, 23, 25, 26, 28-31, 33, 39, and 40 above.

Kerwin et al. do not teach preparing a formulation comprising an antibody, a monoclonal antibody or a human antibody.

Hagiwara et al. teach preparing a stable human monoclonal antibody preparation (see, e.g., Abstract). Hagiwara et al. also teach human monoclonal antibodies have an undesirable property that they easily aggregate and precipitate in a solution state (the 4th paragraph of column 1).

Therefore, it would have been obvious to one of skilled in the art to prepare a pharmaceutical composition comprising a human monoclonal antibody instead of hemoglobin according to the methods taught by Kerwin et al. with a reasonable expectation of success. One would have been motivated to do so because a human monoclonal antibody and a protein have the basic components—amino acids and a human monoclonal antibody possesses characteristics that tend to form aggregates as taught by Hagiwara et al. (the 4th paragraph of column 1), and thus the formulation taught by Kerwin et al. would stablize a human monoclonal antibody

Claim Objections—Minor Informalities

10. Claims 1, 3, 4, 9-13, 15-21, 23, 28 are objected to because they recite non-elected species.

Appropriate correction is required.

Conclusions

11. No claims are allowable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ruixiang Li whose telephone number is (571) 272-0875. The examiner can normally be reached on Monday through Friday from 8:30 am to 5:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brenda Brumback, can be reached on (571) 272-0961.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [Brenda.Brumback@uspto.gov]. All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1600.

Ruixiang Li

Ruixiang Li, Ph.D.
Primary Examiner
April 26, 2006

RUIXIANG LI, PH.D.
PRIMARY EXAMINER